

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A current injection-type magnetic domain wall-motion device comprising:

a first magnetic film ~~body~~ directly adjacent to a third magnetic film ~~body~~ and a second magnetic film ~~body~~ directly adjacent to the third magnetic film ~~body~~, the second magnetic film ~~body~~ having a magnetization direction antiparallel to that of the first magnetic film ~~body~~, a first microjunction interface between the first and the third magnetic films ~~bodies~~, and a second microjunction interface between the third and the second magnetic films ~~bodies~~, wherein

the magnetization direction of the third magnetic film ~~body~~ is controlled in such a manner that a current is applied to pass through the first and second microjunction interfaces, such that a magnetic domain wall present between the first and second magnetic films ~~bodies~~ is moved within the third magnetic film ~~body~~ in the same direction as that of the current or in the direction opposite to that of the current by the interaction between the magnetic domain wall and a direct flow of the current.

Claim 2 (Currently Amended): The current injection-type magnetic domain wall-motion device according to Claim 1, wherein the magnetic films ~~bodies~~ are made of a magnetic semiconductor.

Claim 3 (Original): The current injection-type magnetic domain wall-motion device according to Claim 2, wherein the magnetic semiconductor is a (Ga, Mn)As ferromagnetic semiconductor.

Claim 4 (Original): The current injection-type magnetic domain wall-motion device according to Claim 2, wherein the magnetic semiconductor is an (In, Mn)As ferromagnetic semiconductor.

Claim 5 (Original): The current injection-type magnetic domain wall-motion device according to any one of Claims 1 to 4, wherein the current is a pulse current.

Claim 6 (Original): The current injection-type magnetic domain wall-motion device according to Claim 5, wherein the pulse current has a current density of 10^4 - 10^7 A/cm².

Claim 7 (Currently Amended): The current injection-type magnetic domain wall-motion device according to Claim 1, wherein the first and second magnetic films are formed ~~bodies are prepared by film formation~~ in a magnetic field.

Claim 8 (Currently Amended): The current injection-type magnetic domain wall-motion device according to Claim 1, wherein the magnetization directions of the first and second magnetic films ~~bodies~~ are aligned antiparallel to each other with an external magnetic field using a difference in coercive force therebetween after [[a]] film formation.

Claim 9 (Currently Amended): The current injection-type magnetic domain wall-motion device according to Claim 8, wherein the first and second magnetic films ~~bodies~~ are made of different materials.

Claim 10 (Currently Amended): The current injection-type magnetic domain wall-motion device according to Claim 1, wherein the first and second magnetic films ~~bodies~~ are

made of the same material and the second magnetic film ~~body~~ is magnetically coupled with an antiferromagnetic film disposed on the second magnetic film ~~body~~ such that the first and second magnetic films ~~bodies~~ have different coercive forces.

Claim 11 (Currently Amended): The current injection-type magnetic domain wall-motion device according to Claim 1, wherein the first and second magnetic films ~~bodies~~ are made of the same material, and have different film thicknesses, such that the first and second magnetic films ~~bodies~~ have different coercive forces.

Claim 12 (Currently Amended): The current injection-type magnetic domain wall-motion device according to Claim 1, wherein the first and second magnetic films ~~bodies~~ are made of the same material, and have different shapes, such that the first and second magnetic films ~~bodies~~ have different coercive forces due to difference of shape anisotropy.

Claim 13 (Currently Amended): The current injection-type magnetic domain wall-motion device according to Claim 2, 3, or 4, wherein different external electric fields are applied to the first and second magnetic films ~~bodies~~ made of the magnetic semiconductor, such that the first and second magnetic films ~~bodies~~ have different coercive forces.

Claim 14 (Currently Amended): The current injection-type magnetic domain wall-motion device according to Claim 1, wherein the third magnetic film ~~body~~ has a reduced cross-sectional area such that the magnetic domain wall is encouraged to be positioned at the first or second microjunction interface, whereby the energy loss due to the creation of the magnetic domain wall in the third magnetic film ~~body~~ is less than both that in the first magnetic film ~~body~~ and that in the second magnetic film ~~body~~.

Claim 15 (Currently Amended): The current injection-type magnetic domain wall-motion device according to Claim 1, wherein the third magnetic film body is made of a material with a magnetization smaller than that of a material for forming the first and second magnetic films bodies such that the magnetic domain wall is encouraged to be positioned at the first or second microjunction interface, whereby the energy loss due to the creation of the magnetic domain wall in the third magnetic film body is less than both that in the first magnetic film body and that in the second magnetic film body.

Claim 16 (Currently Amended): The current injection-type magnetic domain wall-motion device according to Claim 1, wherein the first to third magnetic films bodies are made of the same material and the magnetization of the third magnetic film body is rendered smaller than both that of the first magnetic film body and that of the second magnetic film body by applying an external electric field to the third magnetic film body such that the magnetic domain wall is encouraged to be positioned at the first or second microjunction interface, whereby the energy loss due to the creation of the magnetic domain wall in the third magnetic film body is less than both that in the first magnetic film body and that in the second magnetic film body.

Claim 17 (Previously Presented): The current injection-type magnetic domain wall-motion device according to Claim 1, wherein the first and second microjunction interfaces have constrictions such that the magnetic domain wall is encouraged to be positioned at the first or second microjunction interface, whereby the magnetic domain wall is encouraged to be trapped at one of the constrictions.

Claim 18 (Currently Amended): The current injection-type magnetic domain wall-motion device according to Claim 1, wherein the magnetization direction of the third magnetic film ~~body~~ can be read out.

Claim 19 (Currently Amended): The current injection-type magnetic domain wall-motion device according to Claim 18, wherein the magnetization state of the third magnetic film ~~body~~ is read out in such a manner that the resistance of the third magnetic film ~~body~~ is measured by applying a small current that is insufficient to move the magnetic domain wall, to a current injection terminal using a feature that the device has different resistances depending whether the magnetic domain wall is located at the first or second microjunction interface.

Claim 20 (Currently Amended): The current injection-type magnetic domain wall-moving device according to Claim 19, wherein the first and second microjunction interfaces are formed to have asymmetric structure such that a difference in resistance is readily created in the third magnetic film ~~body~~.

Claim 21 (Currently Amended): The current injection-type magnetic domain wall-moving device according to Claim 1, wherein the first and second magnetic films ~~bodies~~ have fixed magnetization directions.